Cost & Allowables
User Manual

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Introduction

Cost & Allowables is used to monitor the financial performance of a project. The current allowable generated by Candy is compared with the current costs as captured in the accounting system like BuildSmart®.

Whilst it is important to understand where a project stands financially at any point in time, it is more important to have the ability to forecast the financial status at completion.

The Cost & Allowables module provides all the tools necessary to achieve these goals and thus assists the project team to make valued decisions in order to maximise the profitability of a project.

To summarise, Cost & Allowables is used to analyse:

- To date Allowable v To Date costs.
- Remaining Allowable v Remaining cost.
- At Completion Allowable v At Completion cost.

There are a variety of documents and reports available which can be customised to the requirements of the project team.

Requirements

In order to get the most benefit out of Cost & Allowables, the user should have a good knowledge of Candy Estimating & Valuations as this manual will refer to the bill document, valuations, worksheets, resources, project codes and Subcontract Manager.

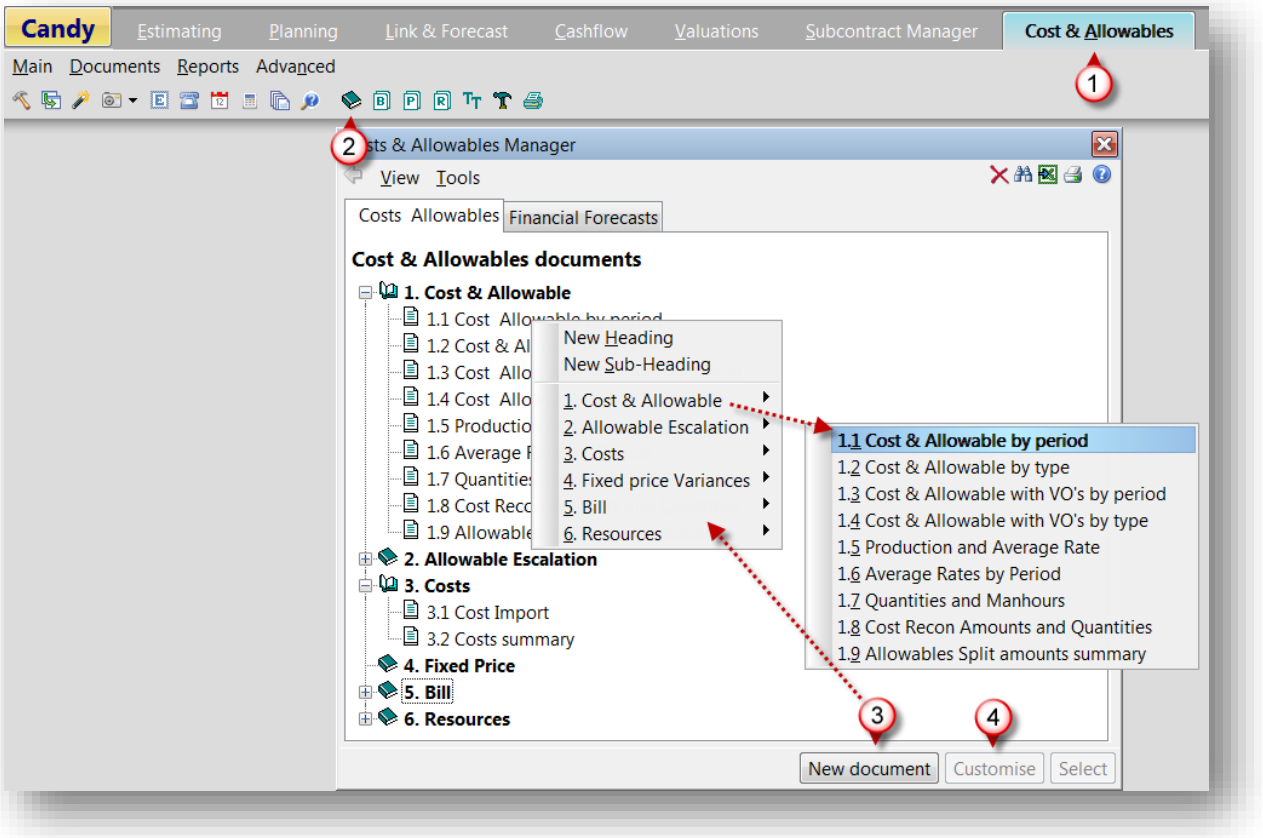
Definitions

The following is a list of definitions for the terminology used in this manual:

- Allowable to date - Actual quantity x Net rate
- Cost to date - Imported cost to date
- Variance to date - Allowable to date - Cost to date
- Allowable remaining - Remaining quantity x Net rate
- Cost remaining - Remaining quantity x Cost rate
- Variance remaining - Allowable remaining – Cost remaining
- Allowable at completion - Final quantity x Net rate
- Cost at completion - Cost to date + Cost remaining
- Variance at completion - Allowable at completion – Cost at completion

Getting Started

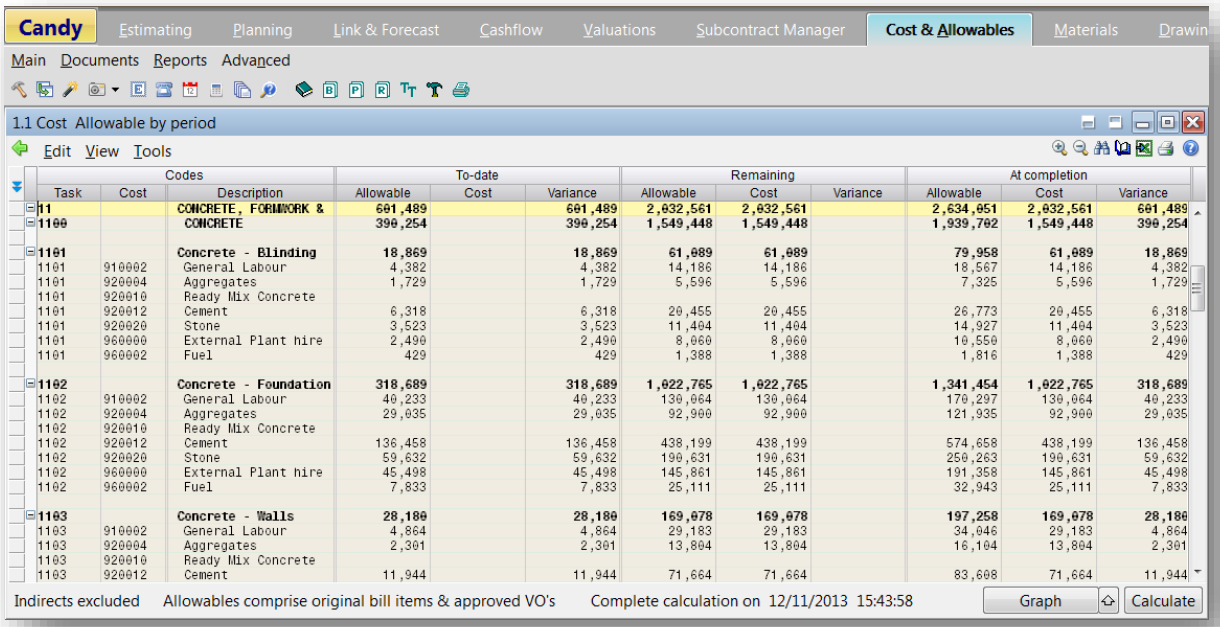
The Cost & Allowables documents can be found under the Cost & Allowables menu (1) below, and then to Document Manager (2). By using the “New document” button (3), there are a variety of standard documents that can be selected and then customised by using the “Customise” button (4).



Analyse Allowable to date

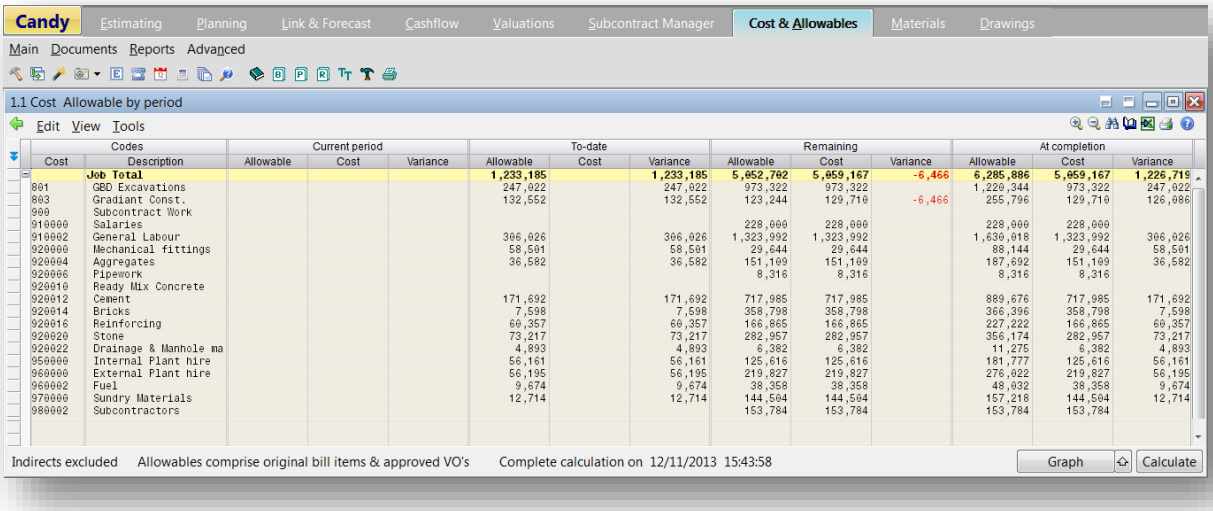
To ensure the correct comparison between Cost & Allowables, it is essential to measure the actual quantity on the same date as the cost close for accounts.

Select document reference *1.1 Cost & Allowables by Period* and open the document, Press Calculate to summarise the latest information.



The above document shows the To-date, Remaining and At completion Allowables for the current Valuation.

The Task code column is included by default in this document. The BuildSmart® accounting system has both the Task code (Activity code) and Cost code (Ledger code) for more comprehensive financial reporting. If your accounting system does not make use of Task codes then this column can be deleted from the document (see below).

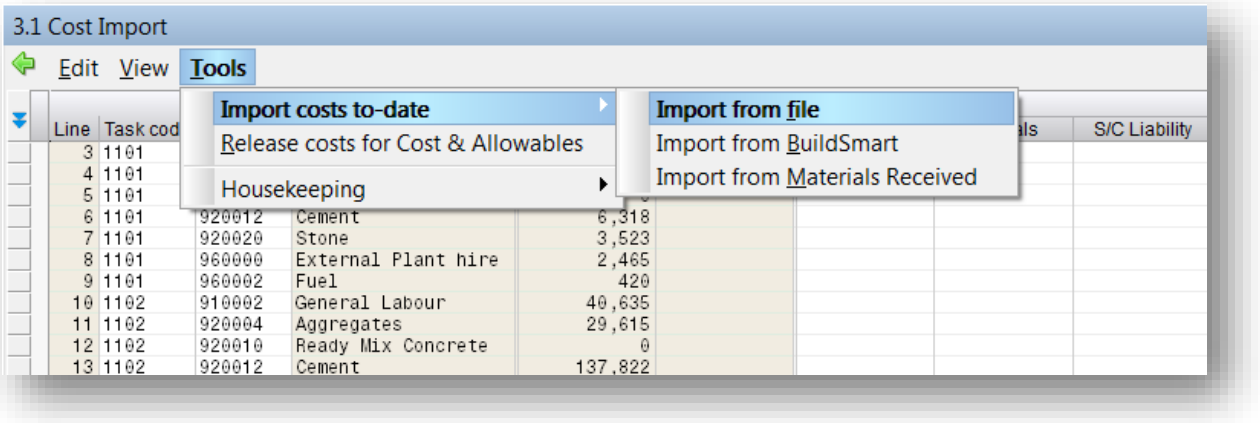


Import To-date costs

The To-date costs can be imported as follows:

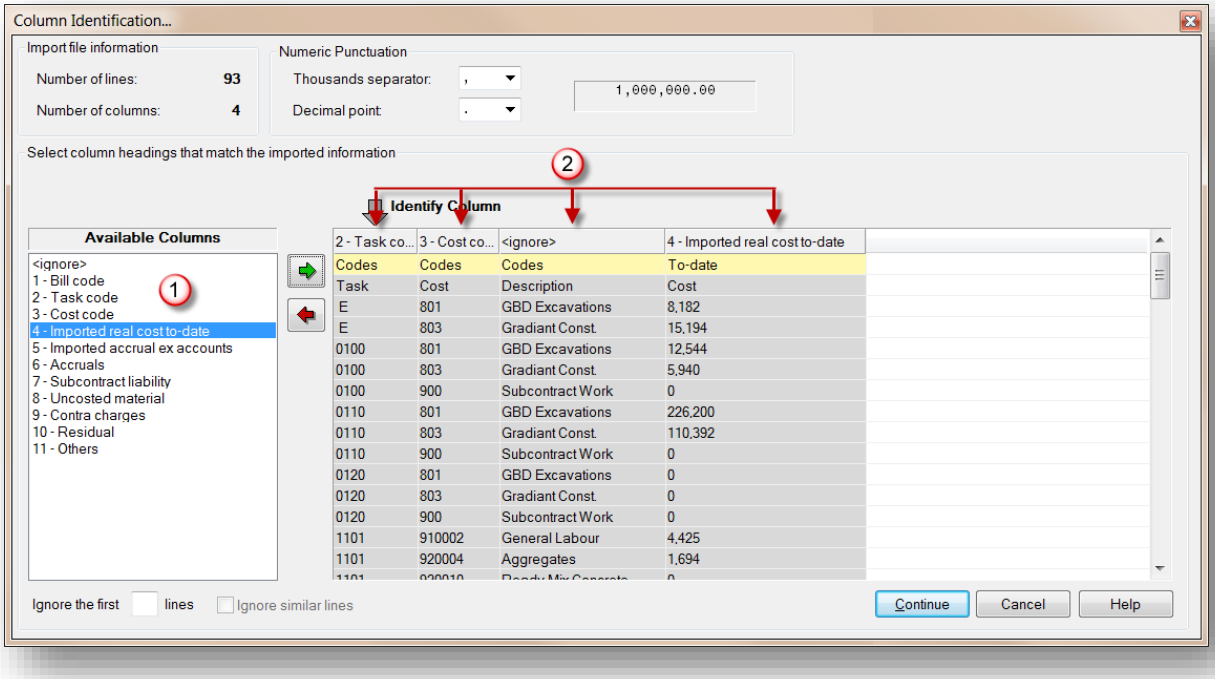
1. Using a text file from accounting software package.
2. From an Excel file.
3. From the Candy Material received module.
4. From BuildSmart® accounting software.

From the Cost & Allowables document manager, select document *3.1 Cost Import*. Select **Tools > Import costs to-date > Import from file**. Use the explorer to find the text file and import the file.



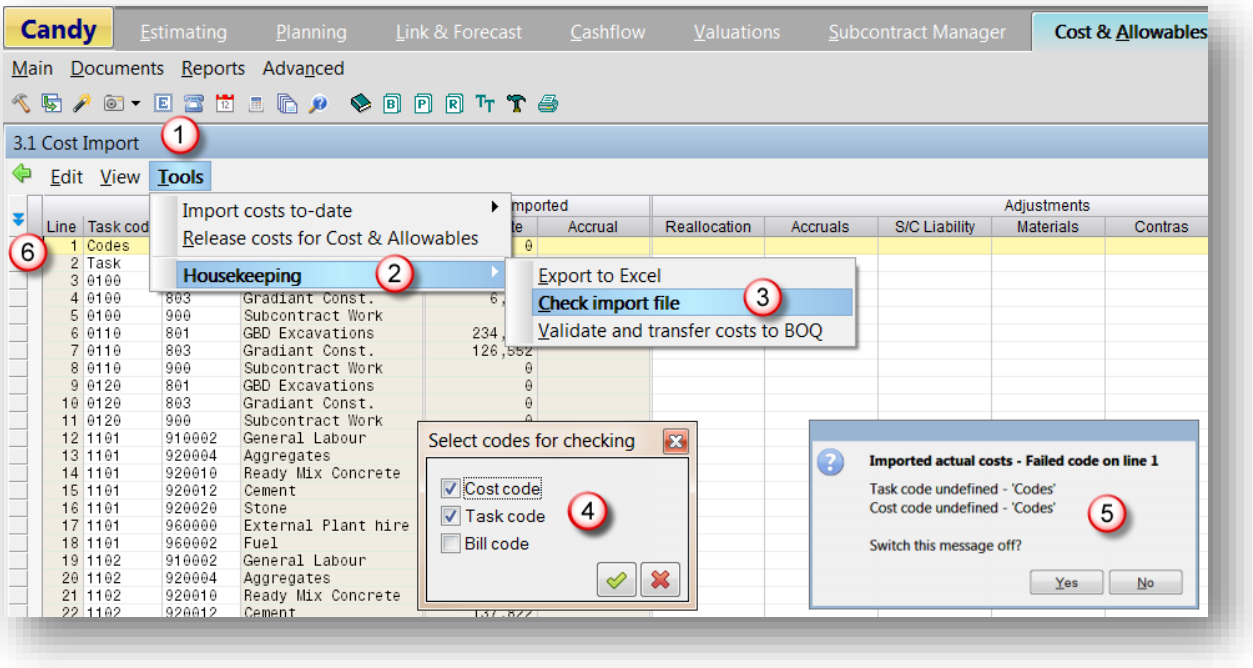
To complete the import process, select from the available columns headings (1) below, which match the headings (2) of the imported document.

The Code description does not require matching as Candy already associates the Cost code description with the Cost code.



When the import is complete, the imported information needs to be checked against the Candy information for differences:

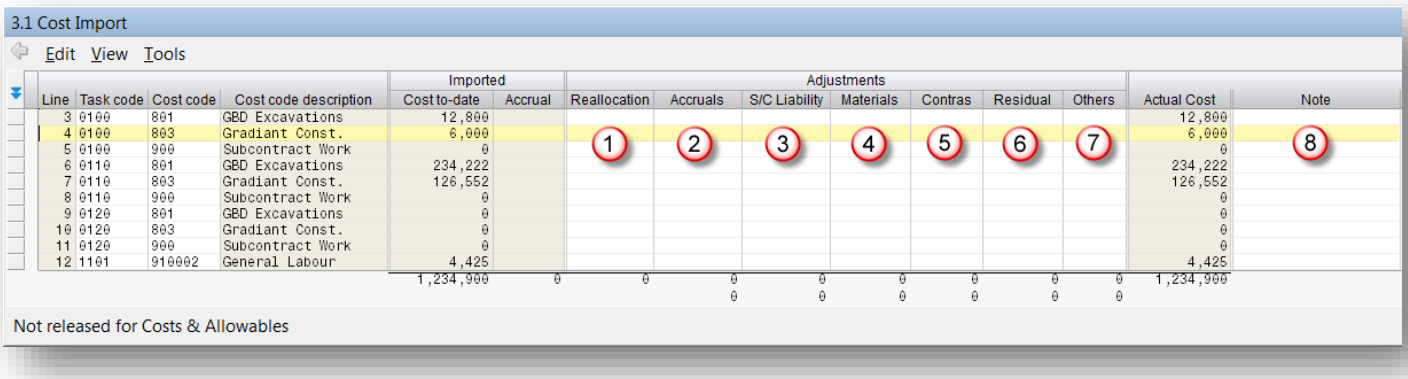
1. Select **Tools**.
2. Select **Housekeeping**.
3. Select **Check import file**.
4. Select the codes for checking.
5. If the imported file is not fully compatible with information within Candy, a message will be displayed advising which line/lines are not compatible. These lines can be filtered out and displayed.
6. It is most likely that the column headings in the import document which are not defined as cost codes in Candy. These should be deleted using Control + Delete.
7. Once the file has been corrected, run the **Check import file** again and you should get a message, "**Validation successful**"



Cost Adjustments

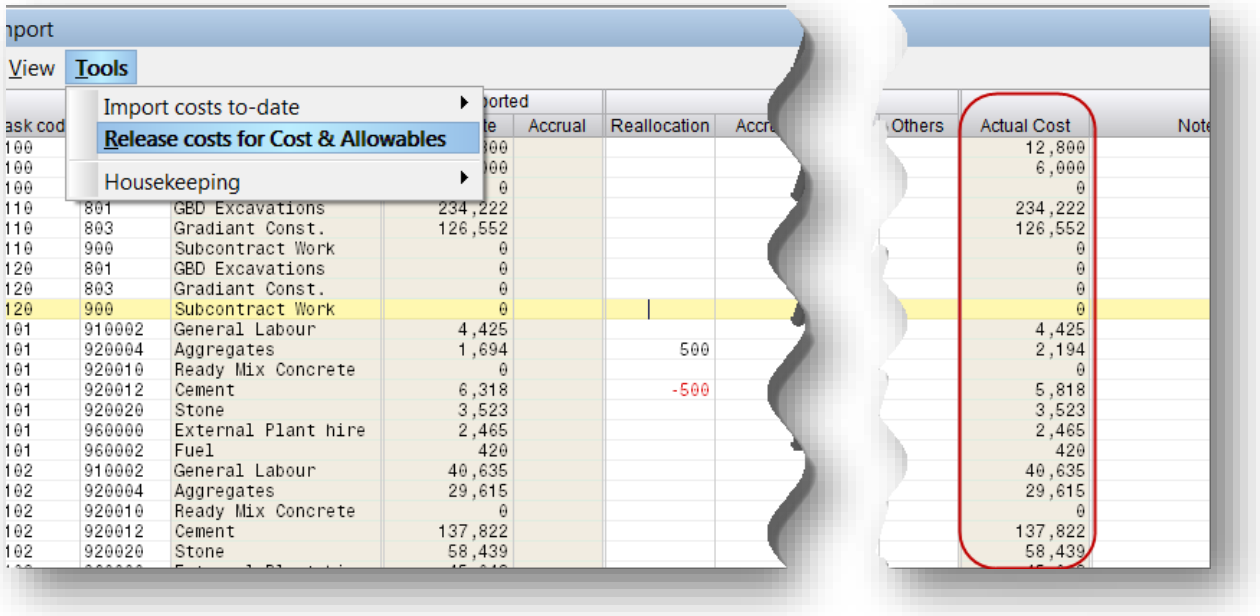
After the costs have been imported, further adjustments can be made by the site personnel to reflect the “true” costs to date. These adjustments are made to the imported costs on the same document, *3.1 Cost import*. Adjustments can be made under the following headings:

1. Re-allocation – costs that have been misallocated can be corrected. The total of this column must always add up to zero.
2. Accruals – known costs that have not been captured in the accounts ledger.
3. SC Liability – the difference between the subcontract Pay amount and Due amount. Go to **Subcontract Manager > Subcontract document manager > Document reference 3.1 Subcontract summary**, to see these amounts.
4. Materials – materials that may have been pre-purchased but not claimable in the current valuation, such as materials off site.
5. Contras – contra charges that have yet to be processed.
6. Residual – pre-purchase of equipment such as formwork which must be written off over the period of the structure.
7. Other – any other cost adjustment.
8. Notes – to explain the reasons of the cost adjustments.


3.1 Cost Import
Edit View Tools
Imported
Adjustments
Line Task code Cost code Cost code description Cost to-date Accrual Reallocation Accruals S/C Liability Materials Contras Residual Others Actual Cost Note
3 0100 801 GBD Excavations 12,800 12,800
4 0100 803 Gradiant Const. 6,000 6,000
5 0100 900 Subcontract Work 0 0
6 0110 801 GBD Excavations 234,222 234,222
7 0110 803 Gradiant Const. 126,552 126,552
8 0110 900 Subcontract Work 0 0
9 0120 801 GBD Excavations 0 0
10 0120 803 Gradiant Const. 0 0
11 0120 900 Subcontract Work 0 0
12 1101 910002 General Labour 4,425 4,425
1,234,900 0 0 0 0 0 0 0 0 1,234,900
0 0 0 0 0 0
1 2 3 4 5 6 7 8
Not released for Costs & Allowables

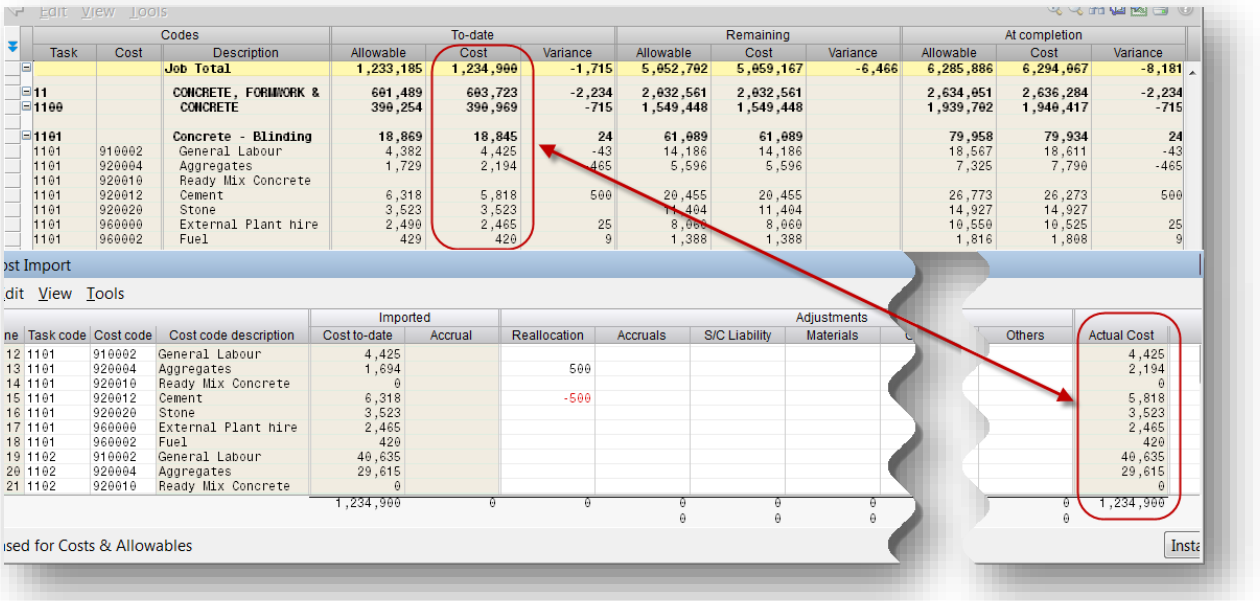
Release the costs

Having made the adjustments, the adjusted costs can now be released for comparison with the allowable.

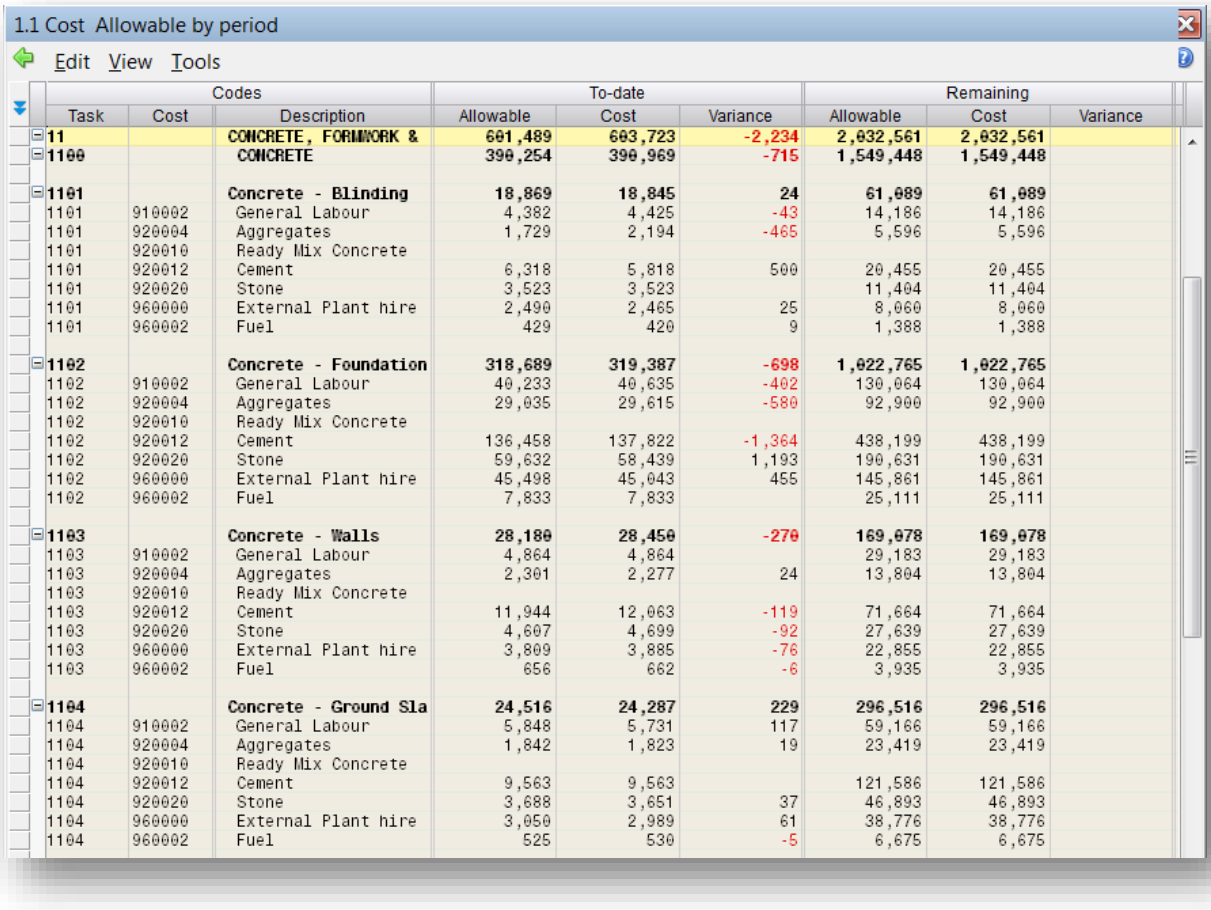


From the document *3.1 Cost Import*, select **Tools > Release costs for Cost & Allowables**.

The “Actual cost” column will now be used in the Cost & allowables documents and now termed as To-date cost.



The screen shot below displays the To-date financial position of the job as the Actual allowable is compared against the To-date costs of the job broken down into the project codes (Task & Cost).



1.1 Cost Allowable by period

Edit View Tools

Codes			To-date			Remaining		
Task	Cost	Description	Allowable	Cost	Variance	Allowable	Cost	Variance
11		**CONCRETE, FORMWORK &**	**601,489**	**603,723**	**-2,234**	**2,032,561**	**2,032,561**	
1100		**CONCRETE**	**390,254**	**390,969**	**-715**	**1,549,448**	**1,549,448**	
1101		**Concrete - Blinding**	**18,869**	**18,845**	**24**	**61,089**	**61,089**	
1101	910002	General Labour	4,382	4,425	-43	14,186	14,186	
1101	920004	Aggregates	1,729	2,194	-465	5,596	5,596	
1101	920010	Ready Mix Concrete						
1101	920012	Cement	6,318	5,818	500	20,455	20,455	
1101	920020	Stone	3,523	3,523		11,404	11,404	
1101	960000	External Plant hire	2,490	2,465	25	8,060	8,060	
1101	960002	Fuel	429	420	9	1,388	1,388	
1102		**Concrete - Foundation**	**318,689**	**319,387**	**-698**	**1,022,765**	**1,022,765**	
1102	910002	General Labour	40,233	40,635	-402	130,064	130,064	
1102	920004	Aggregates	29,035	29,615	-580	92,900	92,900	
1102	920010	Ready Mix Concrete						
1102	920012	Cement	136,458	137,822	-1,364	438,199	438,199	
1102	920020	Stone	59,632	58,439	1,193	190,631	190,631	
1102	960000	External Plant hire	45,498	45,043	455	145,861	145,861	
1102	960002	Fuel	7,833	7,833		25,111	25,111	
1103		**Concrete - Walls**	**28,180**	**28,450**	**-270**	**169,078**	**169,078**	
1103	910002	General Labour	4,864	4,864		29,183	29,183	
1103	920004	Aggregates	2,301	2,277	24	13,804	13,804	
1103	920010	Ready Mix Concrete						
1103	920012	Cement	11,944	12,063	-119	71,664	71,664	
1103	920020	Stone	4,607	4,699	-92	27,639	27,639	
1103	960000	External Plant hire	3,809	3,885	-76	22,855	22,855	
1103	960002	Fuel	656	662	-6	3,935	3,935	
1104		**Concrete - Ground Sla**	**24,516**	**24,287**	**229**	**296,516**	**296,516**	
1104	910002	General Labour	5,848	5,731	117	59,166	59,166	
1104	920004	Aggregates	1,842	1,823	19	23,419	23,419	
1104	920010	Ready Mix Concrete						
1104	920012	Cement	9,563	9,563		121,586	121,586	
1104	920020	Stone	3,688	3,651	37	46,893	46,893	
1104	960000	External Plant hire	3,050	2,989	61	38,776	38,776	
1104	960002	Fuel	525	530	-5	6,675	6,675	

Whilst there are variances between Allowable and Cost, there are no variances forecast in the remaining work to completion. Future cost variances can also be analysed in Candy. Future costs are influenced by:

- A change in the rate of a resource.
- A change in the production outputs as used on the original worksheets.
- A change in the amount of waste allowed by the estimator.
- The necessity to employ another subcontractor with rates that differ from the allowable rates.

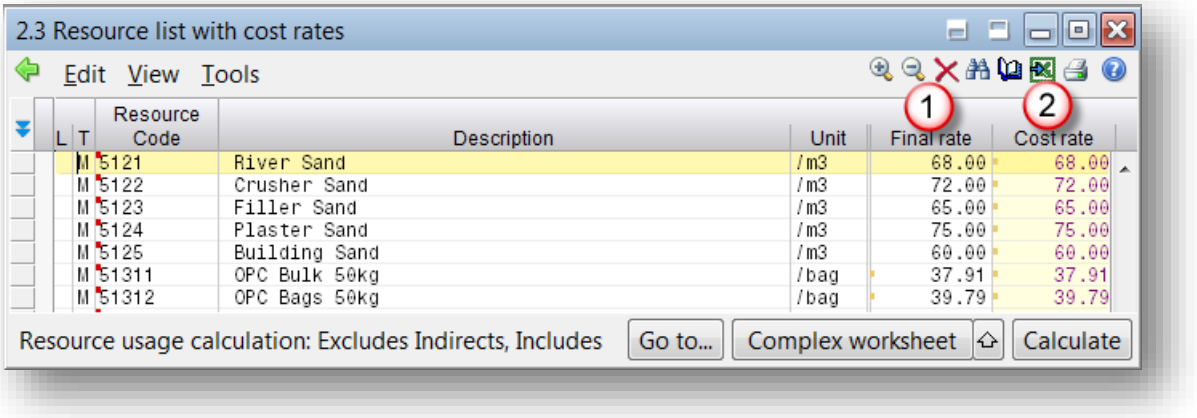
A far more accurate financial forecast can be achieved by making use of the following:

- Cost rates (future resource rate adjustment).
- Cost worksheets
- Subcontract manager.

Cost rate

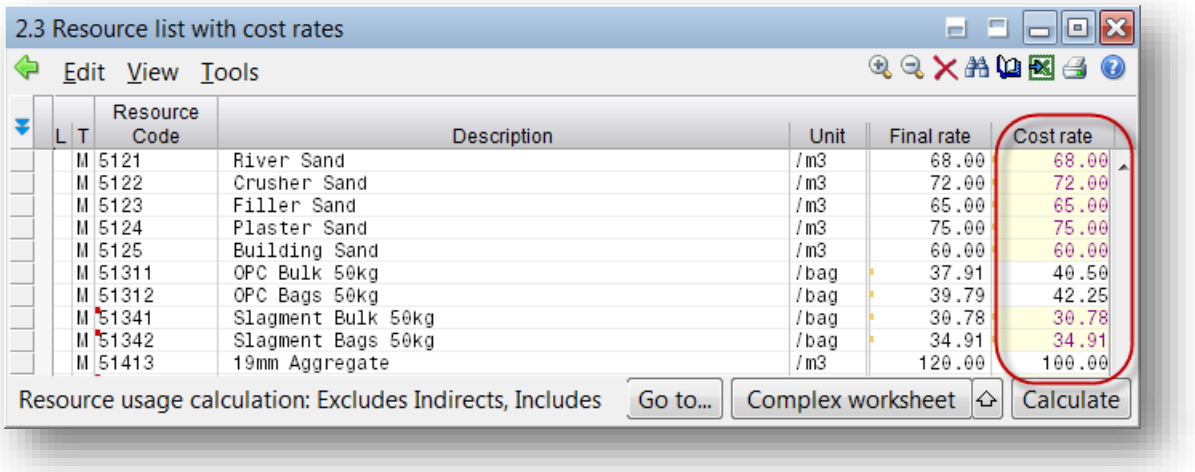
It is inevitable that during the course of a project, the price of resources will change. To analyse the effect of these price changes, the cost rate has to be entered.

Go to **Estimating > Document manager > Document 2.3 Resource list with cost rates**.


2.3 Resource list with cost rates
Edit View Tools
1
2
L T Resource Code Description Unit Final rate Cost rate
M 5121 River Sand /m3 68.00 68.00
M 5122 Crusher Sand /m3 72.00 72.00
M 5123 Filler Sand /m3 65.00 65.00
M 5124 Plaster Sand /m3 75.00 75.00
M 5125 Building Sand /m3 60.00 60.00
M 51311 OPC Bulk 50kg /bag 37.91 37.91
M 51312 OPC Bags 50kg /bag 39.79 39.79
Resource usage calculation: Excludes Indirects, Includes
Go to...
Complex worksheet
Calculate

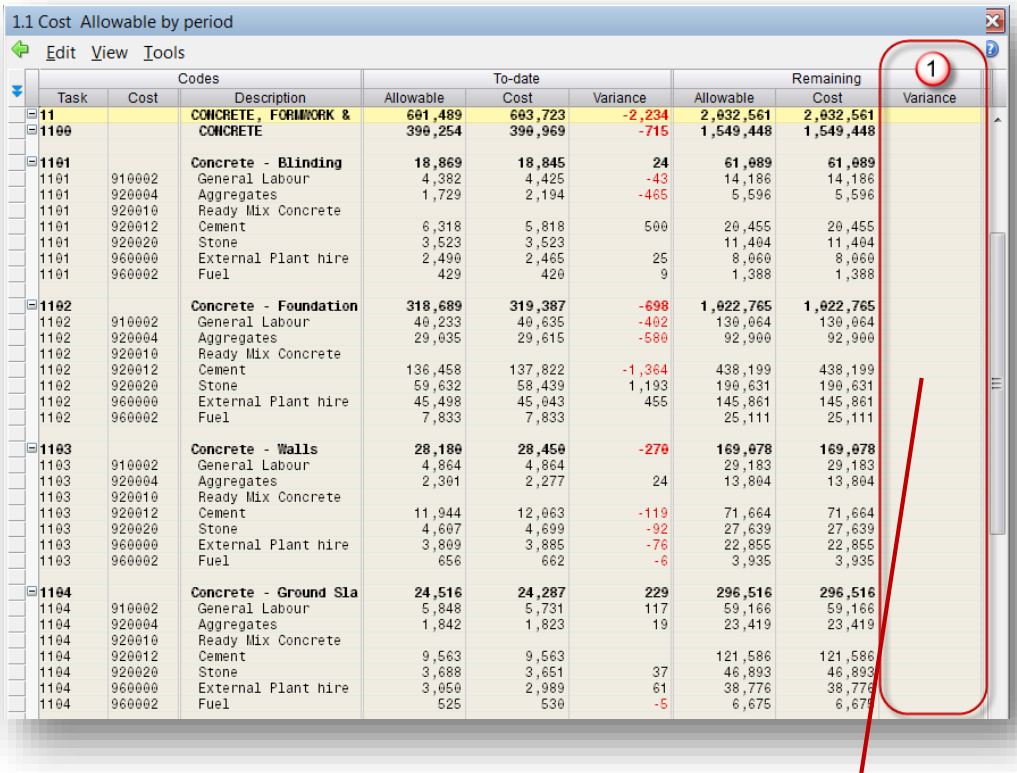
The Final rate (allowable rate) is displayed in (1) above and must not be altered. The Cost rate (2) defaults to the same as the Final rate but can be adjusted as necessary. Changing the Cost rate does not change the allowables but does change the forecast cost to completion.

In this example a buying saving was achieved on the aggregate but cements cost more than the allowable.


2.3 Resource list with cost rates
Edit View Tools
L T Resource Code Description Unit Final rate Cost rate
M 5121 River Sand /m3 68.00 68.00
M 5122 Crusher Sand /m3 72.00 72.00
M 5123 Filler Sand /m3 65.00 65.00
M 5124 Plaster Sand /m3 75.00 75.00
M 5125 Building Sand /m3 60.00 60.00
M 51311 OPC Bulk 50kg /bag 37.91 40.50
M 51312 OPC Bags 50kg /bag 39.79 42.25
M 51341 Slagment Bulk 50kg /bag 30.78 30.78
M 51342 Slagment Bags 50kg /bag 34.91 34.91
M 51413 19mm Aggregate /m3 120.00 100.00
Resource usage calculation: Excludes Indirects, Includes
Go to...
Complex worksheet
Calculate

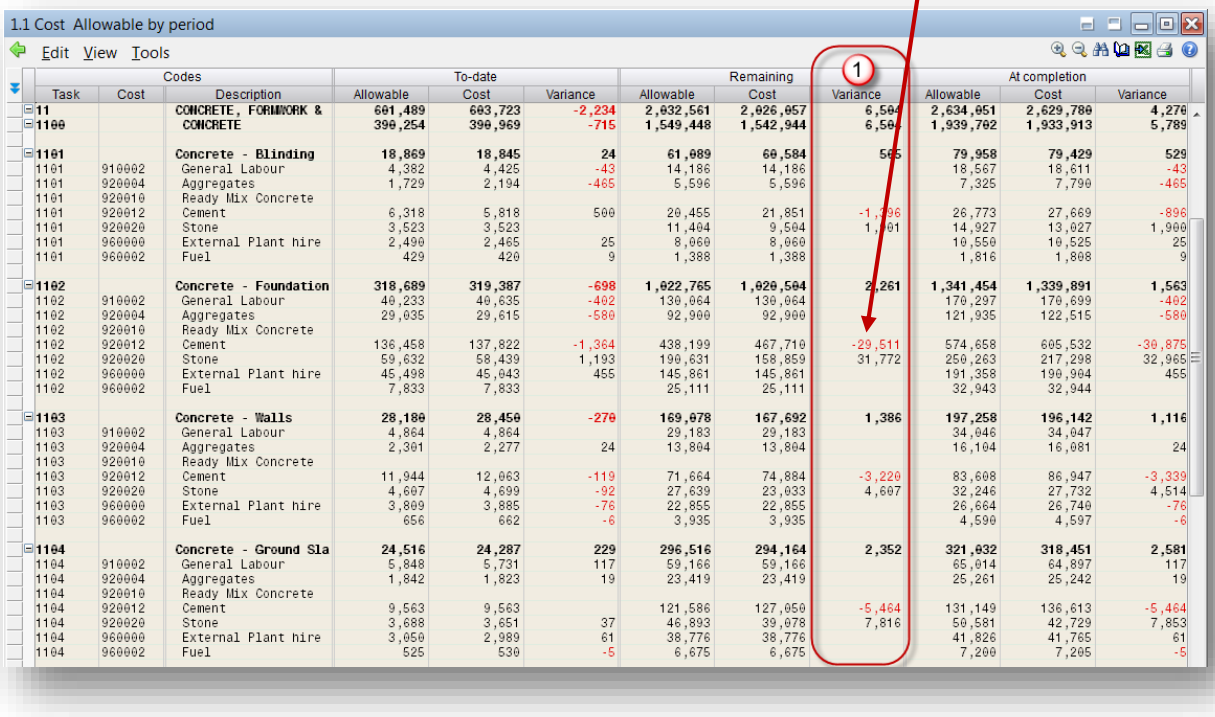
The result of updating the resource costs now gives a very different picture, as can be seen in the Remaining Variance column (1) below.

Before updating Resource cost rates



Task	Cost	Description	To-date Allowable	To-date Cost	To-date Variance	Remaining Allowable	Remaining Cost	Remaining Variance
11		**CONCRETE, FORMWORK &**	**601,489**	**603,723**	**-2,234**	**2,032,561**	**2,032,561**	
1100		**CONCRETE**	**390,254**	**390,969**	**-715**	**1,549,448**	**1,549,448**	
1101		**Concrete - Blinding**	**18,869**	**18,845**	**24**	**61,089**	**61,089**	
1101	910002	General Labour	4,382	4,425	-43	14,186	14,186	
1101	920004	Aggregates	1,729	2,194	-465	5,596	5,596	
1101	920010	Ready Mix Concrete						
1101	920012	Cement	6,318	5,818	500	20,455	20,455	
1101	920020	Stone	3,523	3,523		11,404	11,404	
1101	960000	External Plant hire	2,490	2,465	25	8,060	8,060	
1101	960002	Fuel	429	420	9	1,388	1,388	
1102		**Concrete - Foundation**	**318,689**	**319,387**	**-698**	**1,022,765**	**1,022,765**	
1102	910002	General Labour	40,233	40,635	-402	130,064	130,064	
1102	920004	Aggregates	29,035	29,615	-580	92,900	92,900	
1102	920010	Ready Mix Concrete						
1102	920012	Cement	136,458	137,822	-1,364	438,199	438,199	
1102	920020	Stone	59,632	58,439	1,193	190,631	190,631	
1102	960000	External Plant hire	45,498	45,043	455	145,861	145,861	
1102	960002	Fuel	7,833	7,833		25,111	25,111	
1103		**Concrete - Walls**	**28,180**	**28,450**	**-270**	**169,078**	**169,078**	
1103	910002	General Labour	4,864	4,864		29,183	29,183	
1103	920004	Aggregates	2,301	2,277	24	13,804	13,804	
1103	920010	Ready Mix Concrete						
1103	920012	Cement	11,944	12,063	-119	71,664	71,664	
1103	920020	Stone	4,607	4,699	-92	27,639	27,639	
1103	960000	External Plant hire	3,809	3,885	-76	22,855	22,855	
1103	960002	Fuel	656	662	-6	3,935	3,935	
1104		**Concrete - Ground Sla**	**24,516**	**24,287**	**229**	**296,516**	**296,516**	
1104	910002	General Labour	5,848	5,731	117	59,166	59,166	
1104	920004	Aggregates	1,842	1,823	19	23,419	23,419	
1104	920010	Ready Mix Concrete						
1104	920012	Cement	9,563	9,563		121,586	121,586	
1104	920020	Stone	3,688	3,651	37	46,893	46,893	
1104	960000	External Plant hire	3,050	2,989	61	38,776	38,776	
1104	960002	Fuel	525	530	-5	6,675	6,675	

After updating Resource cost rates



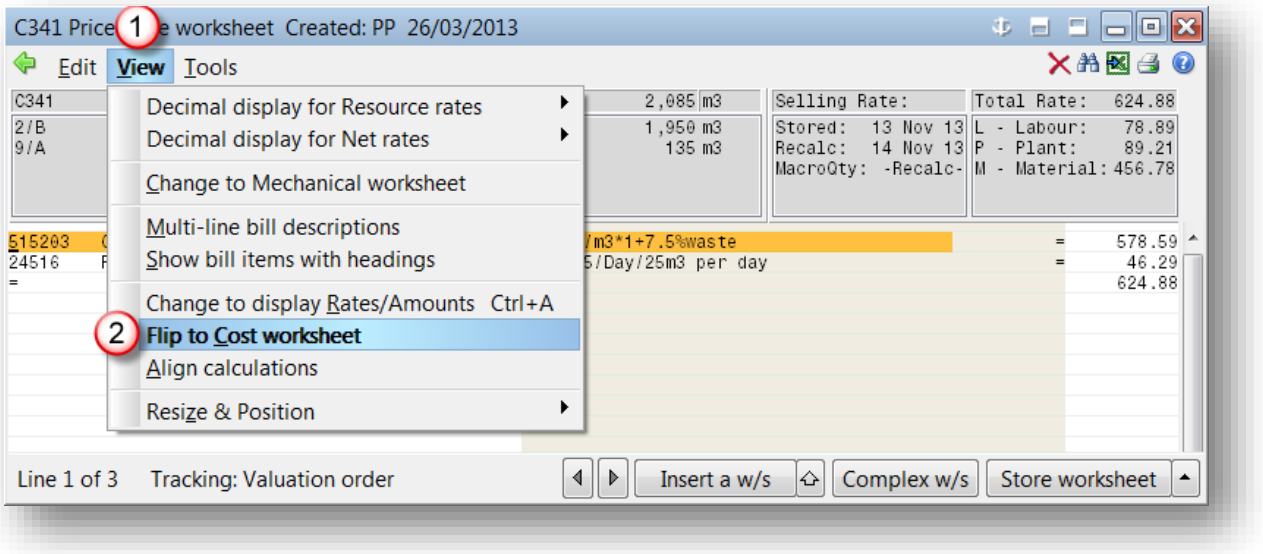
Task	Cost	Description	To-date Allowable	To-date Cost	To-date Variance	Remaining Allowable	Remaining Cost	Remaining Variance	At completion Allowable	At completion Cost	At completion Variance
11		**CONCRETE, FORMWORK &**	**601,489**	**603,723**	**-2,234**	**2,032,561**	**2,026,057**	**6,504**	**2,634,051**	**2,629,780**	**4,270**
1100		**CONCRETE**	**390,254**	**390,969**	**-715**	**1,549,448**	**1,542,944**	**6,504**	**1,939,702**	**1,933,913**	**5,789**
1101		**Concrete - Blinding**	**18,869**	**18,845**	**24**	**61,089**	**60,584**	**505**	**79,958**	**79,429**	**529**
1101	910002	General Labour	4,382	4,425	-43	14,186	14,186		18,567	18,611	-43
1101	920004	Aggregates	1,729	2,194	-465	5,596	5,596		7,325	7,790	-465
1101	920010	Ready Mix Concrete									
1101	920012	Cement	6,318	5,818	500	20,455	21,851	-1,396	26,773	27,669	-896
1101	920020	Stone	3,523	3,523		11,404	9,504	1,901	14,927	13,027	1,900
1101	960000	External Plant hire	2,490	2,465	25	8,060	8,060		10,550	10,525	25
1101	960002	Fuel	429	420	9	1,388	1,388		1,816	1,808	9
1102		**Concrete - Foundation**	**318,689**	**319,387**	**-698**	**1,022,765**	**1,020,504**	**2,261**	**1,341,454**	**1,339,891**	**1,563**
1102	910002	General Labour	40,233	40,635	-402	130,064	130,064		170,297	170,699	-402
1102	920004	Aggregates	29,035	29,615	-580	92,900	92,900		121,935	122,515	-580
1102	920010	Ready Mix Concrete									
1102	920012	Cement	136,458	137,822	-1,364	438,199	467,710	-29,511	574,658	605,532	-30,875
1102	920020	Stone	59,632	58,439	1,193	190,631	158,859	31,772	250,263	217,298	32,965
1102	960000	External Plant hire	45,498	45,043	455	145,861	145,861		191,358	190,904	455
1102	960002	Fuel	7,833	7,833		25,111	25,111		32,943	32,944	
1103		**Concrete - Walls**	**28,180**	**28,450**	**-270**	**169,078**	**167,692**	**1,386**	**197,258**	**196,142**	**1,116**
1103	910002	General Labour	4,864	4,864		29,183	29,183		34,046	34,047	
1103	920004	Aggregates	2,301	2,277	24	13,804	13,804		16,104	16,081	24
1103	920010	Ready Mix Concrete									
1103	920012	Cement	11,944	12,063	-119	71,664	74,884	-3,220	83,608	86,947	-3,339
1103	920020	Stone	4,607	4,699	-92	27,639	23,033	4,607	32,246	27,732	4,514
1103	960000	External Plant hire	3,809	3,885	-76	22,855	22,855		26,664	26,740	-76
1103	960002	Fuel	656	662	-6	3,935	3,935		4,590	4,597	-6
1104		**Concrete - Ground Sla**	**24,516**	**24,287**	**229**	**296,516**	**294,164**	**2,352**	**321,032**	**318,451**	**2,581**
1104	910002	General Labour	5,848	5,731	117	59,166	59,166		65,014	64,897	117
1104	920004	Aggregates	1,842	1,823	19	23,419	23,419		25,261	25,242	19
1104	920010	Ready Mix Concrete									
1104	920012	Cement	9,563	9,563		121,586	127,050	-5,464	131,149	136,613	-5,464
1104	920020	Stone	3,688	3,651	37	46,893	39,078	7,816	50,581	42,729	7,853
1104	960000	External Plant hire	3,050	2,989	61	38,776	38,776		41,826	41,765	61
1104	960002	Fuel	525	530	-5	6,675	6,675		7,200	7,205	-5

Cost worksheets

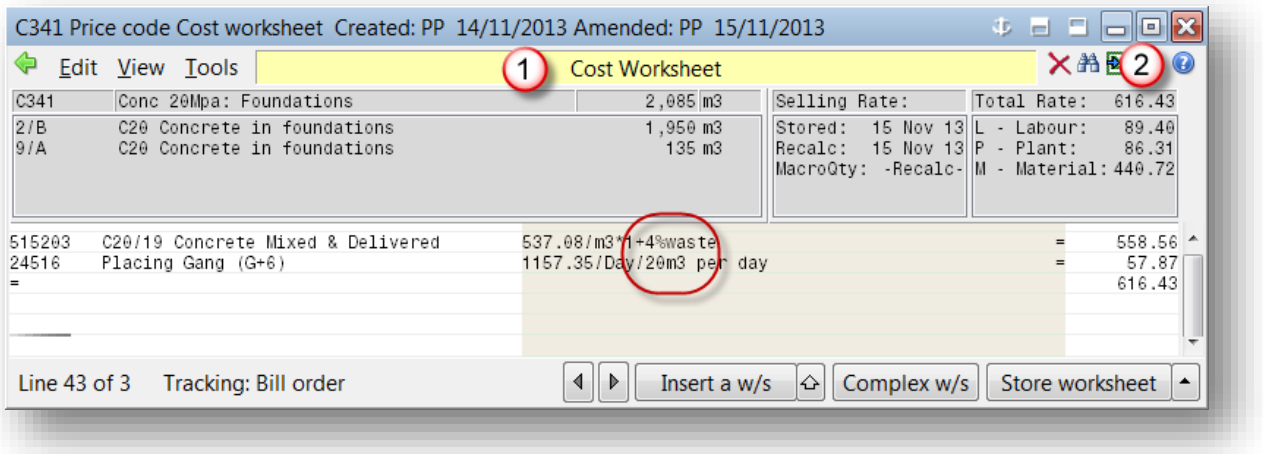
Production outputs used for the original estimate may also need adjustment to reflect the current conditions on site. Similarly, waste allowances and other variables may require adjustment.

To do this open document *5.1Bill with Cost rates for Cost w/s adjustment* and select the worksheet requiring adjustment.

Select **View** (1) **> Flip to Cost worksheet** (2).



In this exercise the production output is to be reduced from 25m3/day to 20m3/day and the waste allowance reduced from 7.5% to 4%..



Notice that the title of the worksheet is clearly shown as **Cost Worksheet** (1) above and after changing the production output the cost rate now differs from the net rate (2).

Subcontract costs

Forecasting the cost to completion for subcontract work, has been simplified by using Subcontract Manager.

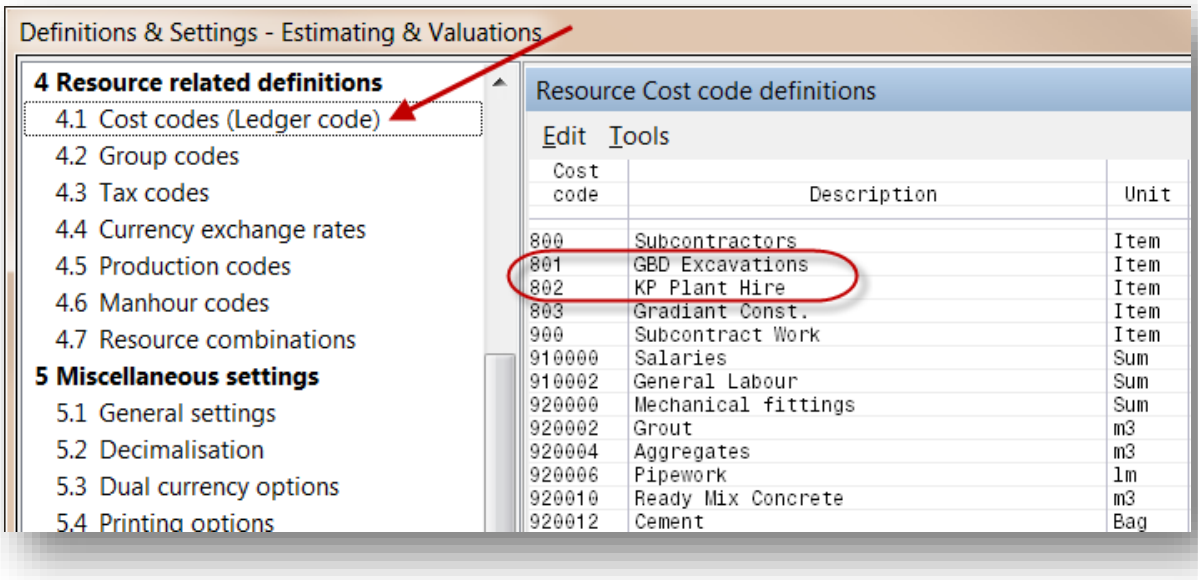
The Cost & Allowable will be reported against the subcontract accounts (ledger) code without changing cost or allowable worksheets, even if there are multiple subcontractors to one or more BOQ items.

This is possible by identifying the “Subcontract Cost code” and the “Net worksheet cost code”.

Subcontract Cost code

The Subcontract Cost code is the code to which the payments for this subcontract are allocated. This code will typically be the ledger code used by the accounts department to identify the cost against the subcontractor.

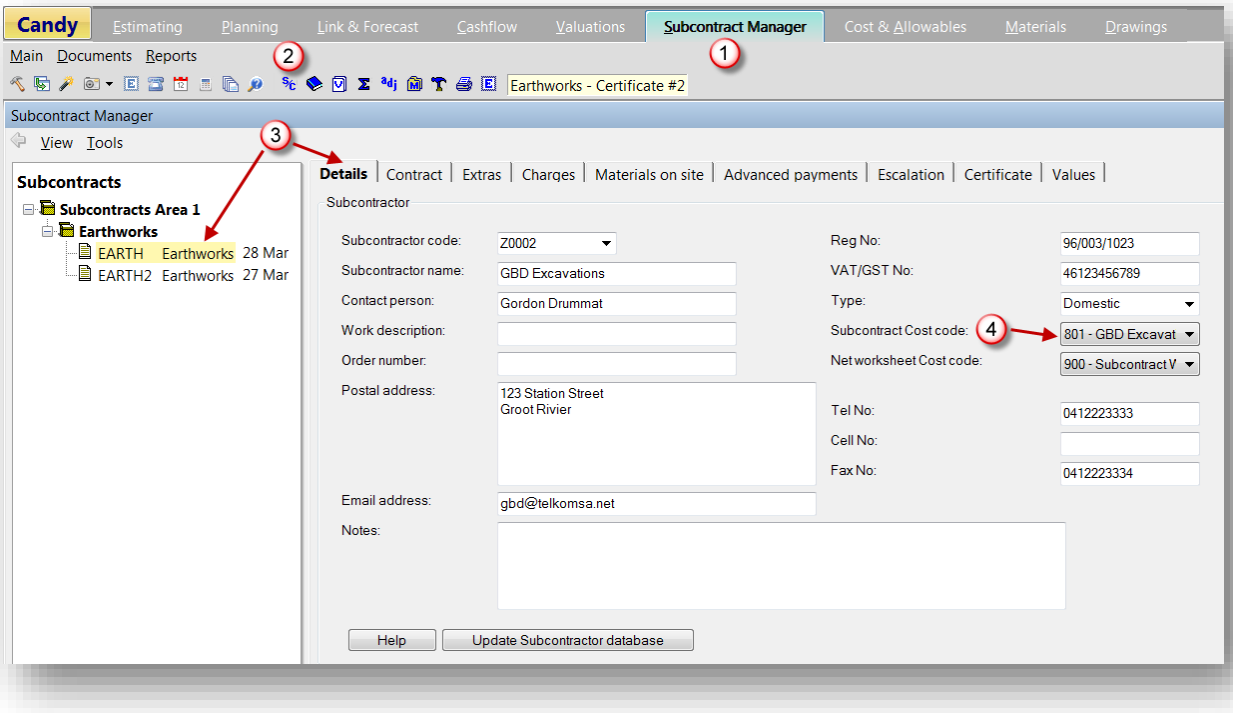
To define a Cost code, go to **Definitions & Settings > 4.1 Cost Codes (Ledger Code).**



In this example there are two subcontractors executing the same bill items, namely GBD Excavations Cost code 801 and KP Plant Hire Cost code 802.

Once the Cost codes have been defined (above), go to **Subcontract Manager** (1) below **> S/C** (2) and then to the **Details** tab (3) of the subcontractors assigned to do this work.

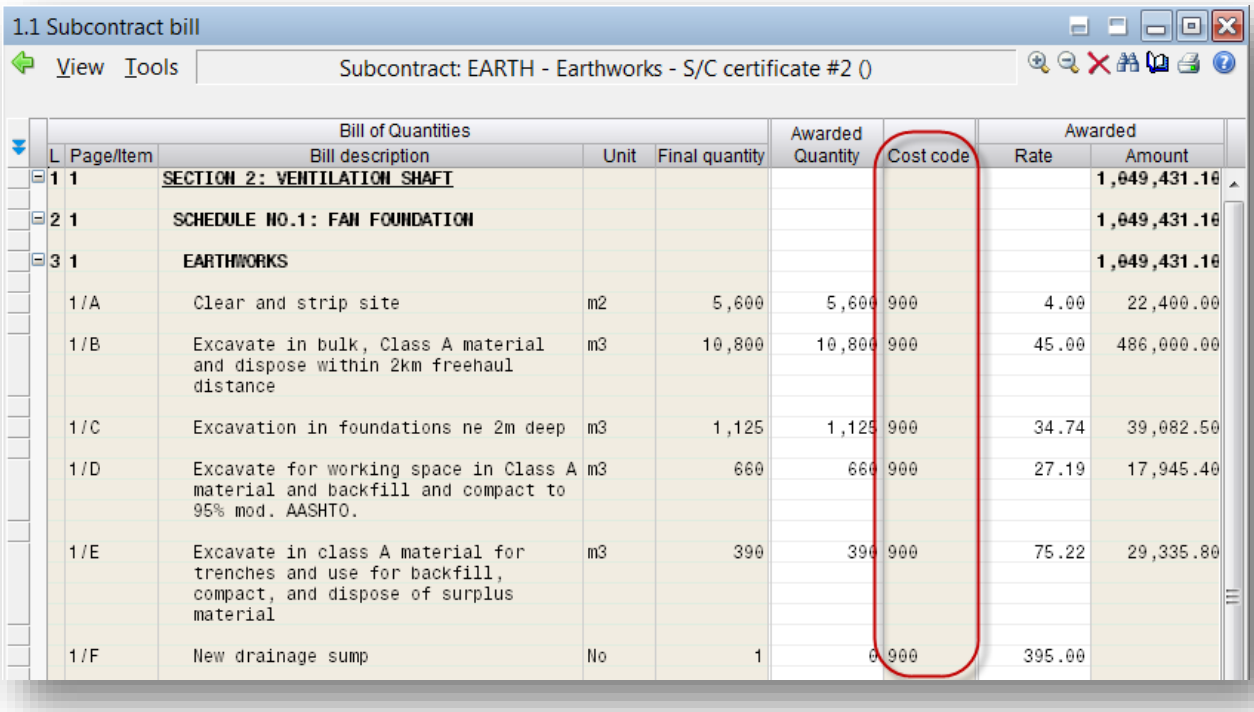
The Subcontract Cost code is selected from the dropdown box (4) and will be the code that the cost and allowable is reported against. In this example, the Subcontract Cost code is 801.



Net worksheet Cost code

This is the cost code of the subcontract resource in the worksheets of the current subcontract bill.

In the example below, the column **16.3 Resource Cost code list** has been added to document **1.1 Subcontract bill** which indicates that the Net worksheet Cost code for the items in the subcontract bill in this example is 900.

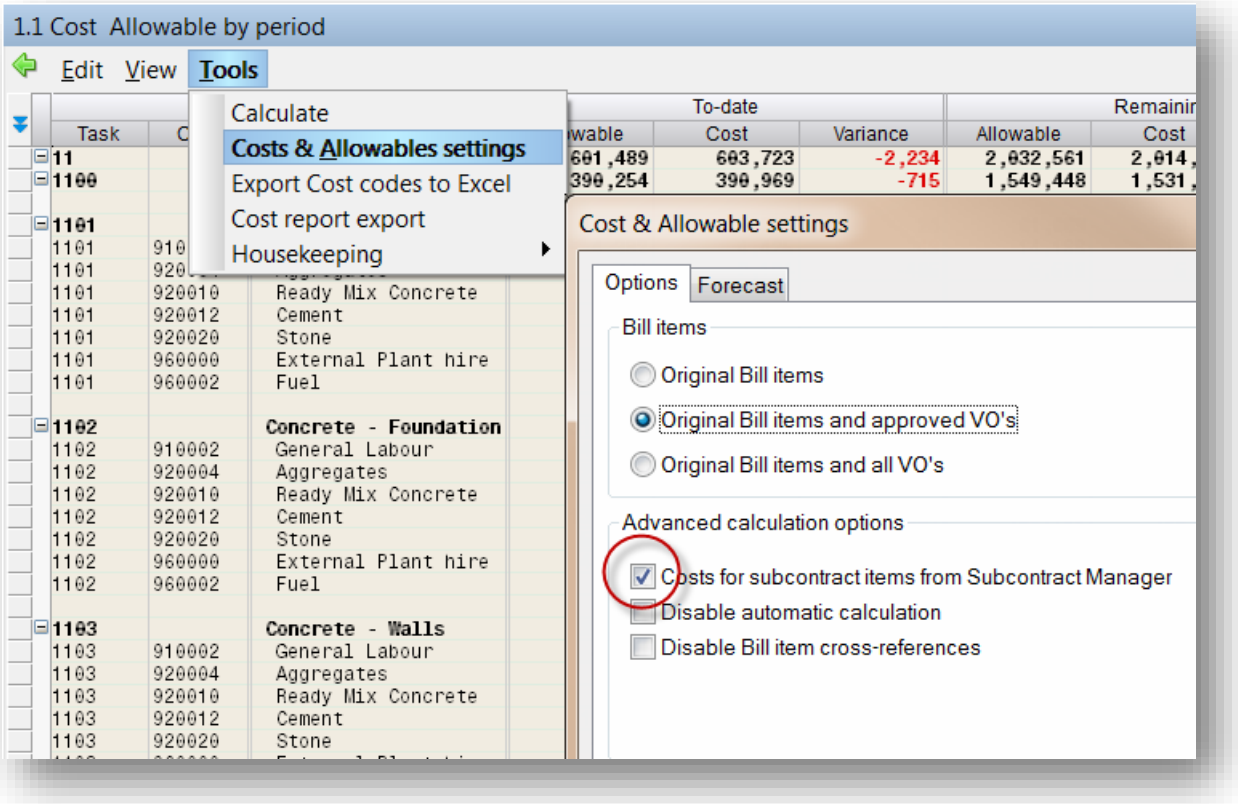


	Bill of Quantities				Awarded Quantity	Cost code	Awarded	
L	Page/Item	Bill description	Unit	Final quantity			Rate	Amount
1	1	SECTION 2: VENTILATION SHAFT						1,049,431.10
2	1	SCHEDULE NO.1: FAN FOUNDATION						1,049,431.10
3	1	EARTHWORKS						1,049,431.10
	1/A	Clear and strip site	m2	5,600	5,600	900	4.00	22,400.00
	1/B	Excavate in bulk, Class A material and dispose within 2km freehaul distance	m3	10,800	10,800	900	45.00	486,000.00
	1/C	Excavation in foundations ne 2m deep	m3	1,125	1,125	900	34.74	39,082.50
	1/D	Excavate for working space in Class A material and backfill and compact to 95% mod. AASHTO.	m3	660	660	900	27.19	17,945.40
	1/E	Excavate in class A material for trenches and use for backfill, compact, and dispose of surplus material	m3	390	390	900	75.22	29,335.80
	1/F	New drainage sump	No	1	0	900	395.00	

Follow the same procedure for Subcontractor “EARTH2” but in this case the Subcontract cost code would be 802 and the Net worksheet code 900.

After following the above procedure, the following rules need to be adhered to in order to calculate the subcontract costs to completion:

1. From the **Cost & Allowables > Document Manager > Document 1.1 Cost Allowable by period > Costs & Allowables settings**, make sure that under “Advanced calculation options” that “Costs for subcontract items from Subcontract Manager is ticked as indicated below.

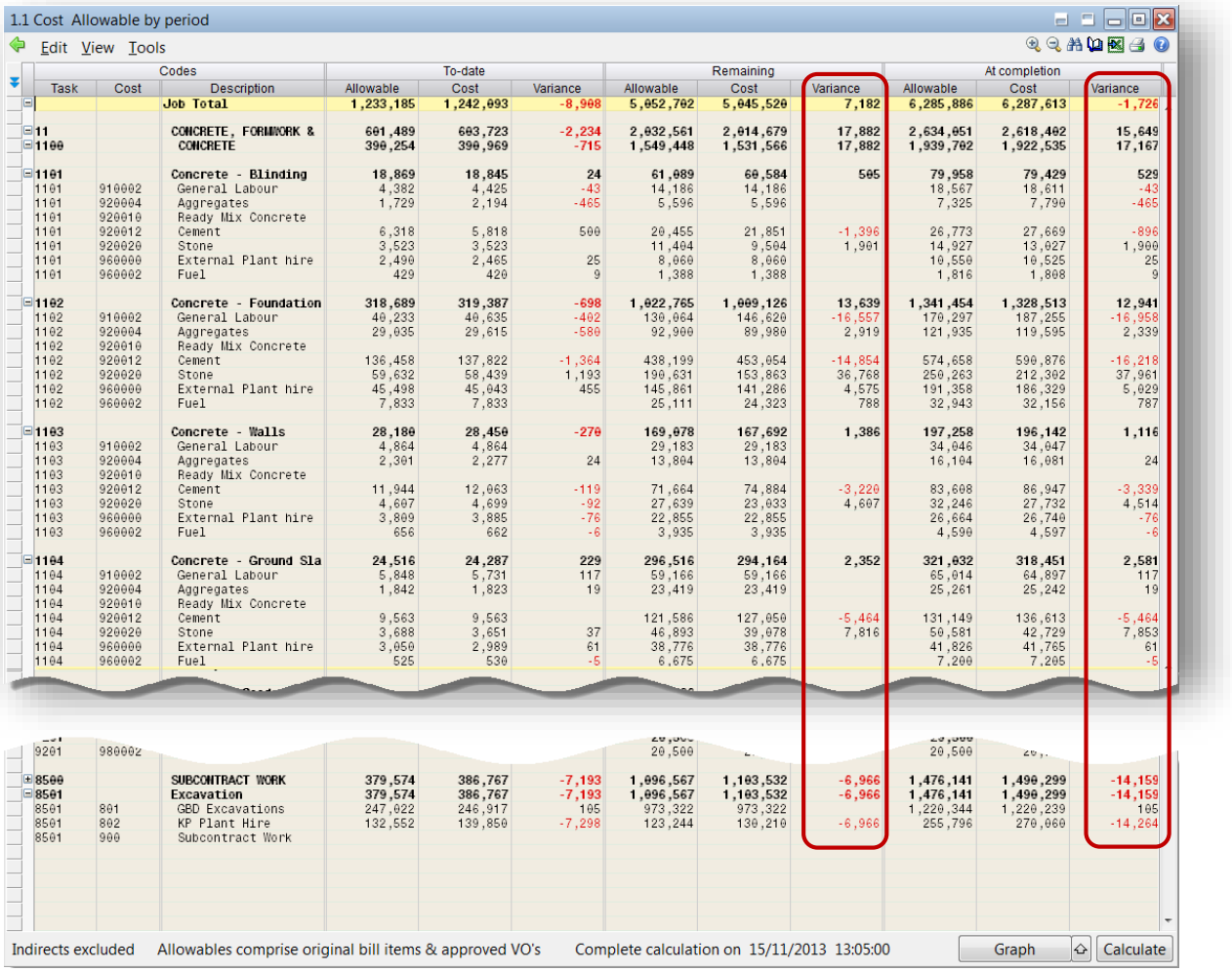


2. The total of the subcontract due quantity must equal the Actual quantities in the main contract Valuation. If there is a difference a message will be displayed for you to make the necessary corrections.
3. No subcontract “Due” quantity may exceed the “Final awarded quantity”.
4. The total “Final awarded quantities” must equal the “Final bill quantities”. Go to **Subcontract Manager > Document Manager > Document 2.1 BOQ with Subcontract allocation** to check for any differences.
5. If rules 2, 3 or 4 have not been obeyed there will be a message displayed for you to correct the error.
6. Internal bill items must be created where the main contractor and subcontractors are undertaking work using the same bill items.

Cost & Allowables at completion

By using the three methods described previously, we now can calculate the forecast cost to completion. Allowable at completion is calculated using the Final quantities x Net rate and the Cost at completion is the sum of the Cost to date and Remaining costs. This information is used to determine the financial performance of the project at completion.

Open the document ***1.1 Cost & Allowables by period*** and calculate:



The changes that were made to ***Resource costs, Cost worksheets and Subcontract Manager*** are all reflected on the above document and the resultant variances to allowables are shown in “Remaining Variance” and “At Completion Variance”.

Set up next valuation

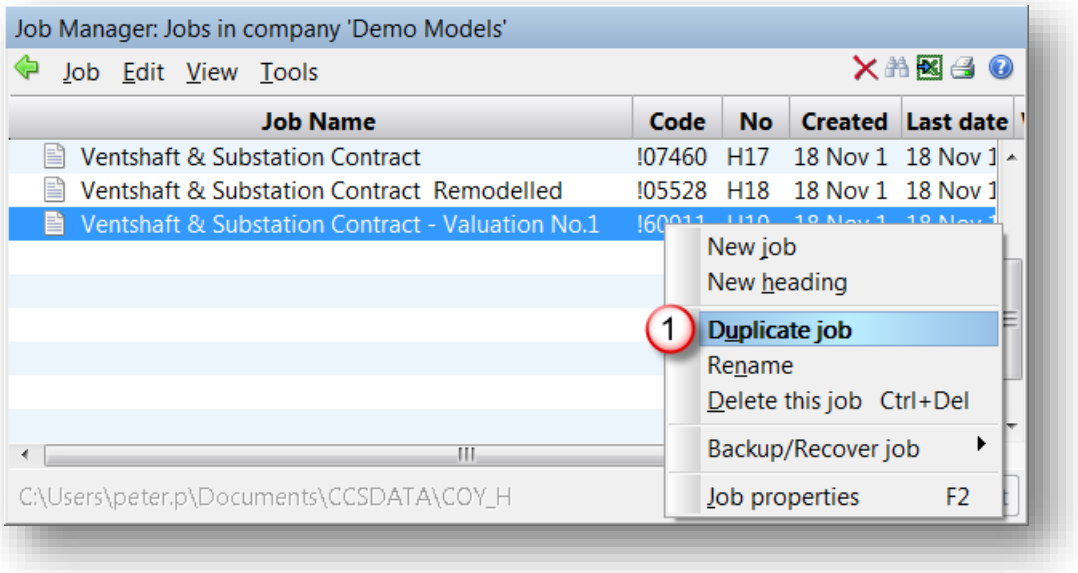
Completion of the Cost & Allowables documents is probably the final stage in the valuation cylcle and at this point it is important to set up the next valuation.

Set up next valuation will copy all the To-date quantities and costs into previous.

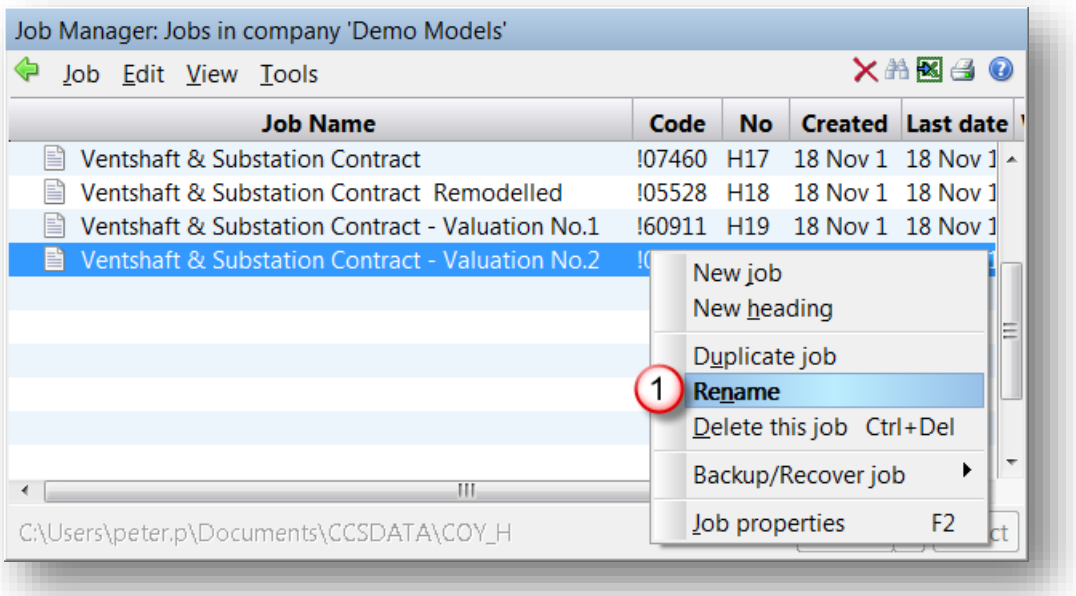
Backup or Copy the job

It is good practice to backup or copy each valuation job before entering the next valuation quantities. Eventually there will be an electronic copy of each valuation which can be referred to if required.

Go to the job manager, and *Duplicate job* (1) below.

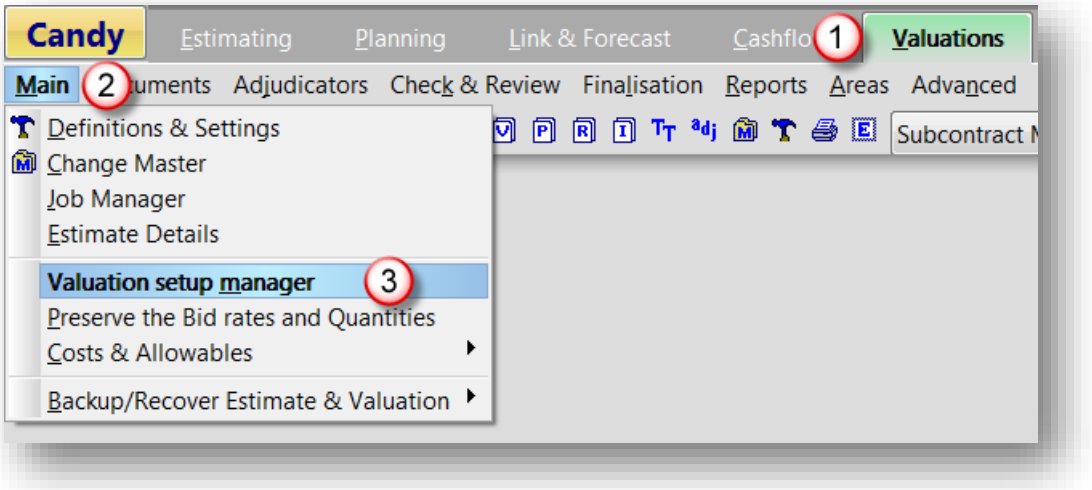


Once copied, *Rename* the new job (1) below.

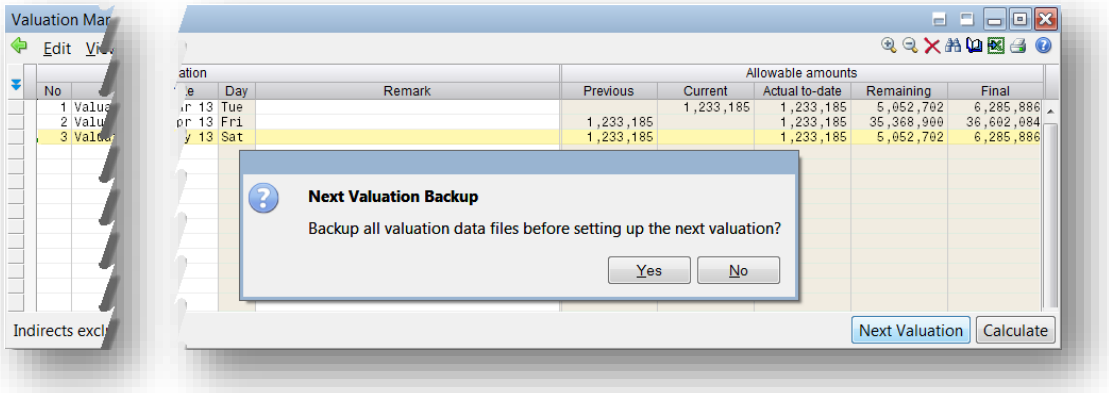


Valuation setup

To setup the next valuation select ***Valuations > Main > Valuation setup manager.***



Confirm *Next valuation*.



Once the next valuation is confirmed, the current valuation will be archived and the details of the new valuation required as below.